

Claims:

1. A plastic bag comprising:
 - i) a cover section comprising first and second opposed walls;
 - 5 ii) a bag section comprising third and fourth opposed walls joined at their side and base edges and an open end by means of which the bag section may be filled with contents, the first and second walls being arranged to enclose the bag section;
 - 10 iii) a closeable mouth defined in a wall of the bag section for access in use to the interior of the bag section;
 - iv) a closeable region, distinct from the mouth, including an end portion of the cover section and an end portion of the bag section proximate the open end of the bag section, within which closeable region the bag section may be sealed closed after filling;
 - 15 wherein, in the closeable region, an internal face of at least one of the respective first and second walls is attached and/or attachable to an adjacent external face of a wall of the bag section, the attachment being such that the bag section is separable in use from the cover section without compromising the seal of the bag section in the closeable region.
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2. A plastic bag as claimed in claim 1 wherein the open end of the bag section may operatively be sealed after filling by heat sealing the bag section walls together in the closeable region.
- 25 3. A plastic bag as claimed in claim 1 or 2 wherein, for attachment of the cover section to the bag section in said closeable region, an internal face of at least one of the respective first and second walls of the cover section is attachable to at least one external face of a bag section wall by heat sealing in the closeable region.
- 30 4. A plastic bag as claimed in claim 3 wherein at least one member selected from the group comprising the internal faces of the first and second walls and the respective external faces of the bag section walls comprises a first treated area

in the closeable region, said first treated area being effective to limit the strength of the heat seal between the cover section and bag section.

- 5 5. A plastic bag as claimed in claim 4 wherein said first treated area comprises printed areas, the printed areas being resistant to heat sealing.
6. A plastic bag as claimed in any of claims 1 to 5 wherein the first and second walls are also separably attached respectively to the bag section walls in areas other than said closeable region.
- 10 7. A plastic bag as claimed in claim 6 wherein the first and second walls are removeably heat sealed respectively to the bag section walls in said separably attached areas.
- 15 8. A plastic bag as claimed in any preceding claim wherein at least one of the first wall and the adjacent bag section wall and/or at least one of the second wall and the adjacent bag section wall comprises a second treated area, said second treated area being effective to limit the strength of the heat seal between respectively the first and third and the second and fourth walls in said separably attached areas.
- 20 9. A plastic bag as claimed in claim 8 wherein said second treated area comprises printed areas, the printed areas being resistant to heat sealing.
- 25 10. A plastic bag as claimed in claim 3, 4 or 5 wherein said first treated area extends across the whole inner surface of the first and/or second wall.
- 30 11. A plastic bag as claimed in claim 10 wherein the first and second walls are also separably attached respectively to the bag section walls in areas other than said closeable region.

12. A plastic bag as claimed in claim 11 wherein the first and second walls are removeably heat sealed respectively to the bag section walls in said separably attached areas.
- 5 13. A plastic bag as claimed in claim 5 or 9 or claim 10 when dependent on claim 5 comprising, in a said treated area, alternate printed and non-printed areas.
14. A plastic bag as claimed in claim 13 wherein the area of the printed areas is greater than the area of the non-printed areas.
- 10 15. A plastic bag as claimed in claim 13 or 14 wherein the printed and non-printed areas alternate to define stripes across the closeable region and/or across the separably attached areas.
- 15 16. A plastic bag as claimed in claim 13, 14 or 15 wherein the non-printed areas have a width of not more than about 2mm.
17. A plastic bag as claimed in any of claims 13 to 16 wherein the printed areas have a width of not more than about 10mm.
- 20 18. A plastic bag as claimed in claim 4 or 8 wherein the treated area comprises an embossed area of one or more of the walls.
19. A plastic bag as claimed in any preceding claim wherein the cover section is longer than the bag section such that the cover section extends beyond the base end of the bag section, the first and second walls being joined to each other in said lengthwise extending portion.
- 25 20. A plastic bag as claimed in any of claims 1 to 5, claim 18 when dependent on claim 4, any of claims 8 to 18 when dependent on claim 5 or claim 19 when dependent of any of claims 1 to 5 wherein the width of the cover section is greater than the width of the bag section such that the cover section extends
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beyond the side edges of the bag section, the first and second walls being joined to each other in said widthwise extending portion.

21. A plastic bag as claimed claim 6 or any claim dependent on claim 6 wherein the
5 width of the cover section is greater than the width of the bag section such that the cover section extends beyond the side edges of the bag section, the first and second walls being joined to each other in said widthwise extending portion.
- 10 22. A plastic bag as claimed in any preceding claim further comprising:
a first closure flap overlying and closing said mouth defined in a wall of said bag section said first closure flap including a first attached region which is peelably attached to said bag section wall such that at least a portion of said first closure flap may be peeled away from said bag section wall across the
15 peelably attached region to reveal the mouth, and, optionally, a second attached region spaced from the peelably attached region in which second region said first closure flap is also attached to said bag section wall.
23. A plastic bag as claimed in any of claims 1 to 21 comprising
20 a first closure flap overlying and closing said mouth defined in a wall of said bag section said first closure flap including a first region which is attached to a said bag section wall, said first closure flap including at least one line of weakness defining a tearable portion of said first closure flap within which tearable portion said first closure flap is not attached to the bag section wall
25 and which tearable portion can be opened by tearing along the line of weakness to reveal the mouth; and, optionally, a second attached region spaced from the tearable portion in which second region said first closure flap is also attached to said bag section wall.
- 30 24. A plastic bag as claimed in claim 22 or 23 wherein the first closure flap extends into the closeable region.

25. A bag as claimed in claim 24 when dependent on claim 4 or on any claim dependent on claim 4 wherein a first treated area is formed on the first closure flap instead of a treated area of the bag section.
- 5 26. A plastic bag according to any preceding claim wherein on or both of the respective first and second walls of the cover section is/are adhered to the bag section proximate the open end of the bag section.
- 10 27. A plastic bag as claimed in claim 26 wherein the cover section is adhered to the bag section at marginal portions of the closeable region.
28. A plastic bag as claimed in any preceding claim further comprising a second closeable mouth defined in the first or second wall of the cover section for access in use to the bag section.
- 15 29. A plastic bag as claimed in any preceding claim further comprising:
a second closure flap including a first region which is peelably attached to said cover section wall such that at least a portion of the closure flap may be peeled away from said cover section wall across the peelably attached region and a
20 second attached region spaced from the peelably attached region in which second region the second closure flap is also attached to said cover section wall.
30. A plastic bag as claimed in any preceding claim further comprising:
a second closure flap including a first region which is attached to said cover
25 section wall, the second closure flap including at least one line of weakness defining a tearable portion of the closure flap within which tearable portion the closure flap is not attached to said cover section wall and which tearable portion can be opened by tearing along the line of weakness and a second attached region spaced from the tearable portion in which second region the second
30 closure flap is also attached to said cover section wall.
31. A plastic bag as claimed in claim 29 or 30 when dependent on claim 28 wherein the second closure flap is arranged to cover the second mouth.

32. A plastic bag as claimed in any of claims 1 to 28 further comprising gripping means formed in or on, or attached to the first or second walls, to facilitate gripping of said walls on separation of the cover section from the bag section.

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33. A method of handling a flowable product comprising:

- i) providing a bag as claimed in any of claims 1 to 32;
- ii) filling the bag section with the flowable product through the open end of the bag; and
- 10 iii) applying heat sealing means to the closeable region thereby to heat seal the bag section walls together to sealingly close the bag section and to heat seal the first and/or second walls to the bag section walls to separably attach cover section and bag section together.

15 34. A method as claimed in claim 33 further comprising:

- iv) separating the cover section from the bag section in the closeable region;
- v) if necessary, separating the cover section from the bag section outside the closeable region and
- vi) withdrawing the bag section from the cover section.

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35. A plastic bag comprising:

- i) a cover section comprising first and second opposed walls;
- ii) a product containing bag section comprising third and fourth opposed walls joined at their side and base edges, the first and second walls being arranged to enclose the bag section;
- 25 iii) a closeable mouth defined in a wall of the bag section for access in use to the interior of the bag section;
- iv) a sealing region, distinct from the mouth, including an end portion of the cover section and an end portion of the bag section within which sealing region the bag section is sealed closed after filling bag section with product;
- 30 wherein, in the sealing region, an internal face of at least one of the respective first and second walls is attached to an adjacent external face of a wall of the bag section, the attachment being such that the bag section is separable in use

from the cover section without compromising the seal of the bag section in the sealing region.

36. A plastic bag as claimed in claim 35 wherein, within the sealing region the
5 respective first and second walls of the cover section are attached to at least
 one of the external faces of the respective bag section walls of the bag section
 by means of a heat seal formed contemporaneously with the heat seal which
 seals the bag section walls.
- 10 37. A plastic bag as claimed in claim 36 wherein at least one of the internal faces of
 the first and second walls and the external faces of the bag section walls
 comprises a treated area in the sealing region, the treated area being effective
 to limit the strength of the heat seal between the cover section and bag section.
- 15 38. A plastic bag as claimed in any of claims 35 to 37 further comprising:
 a first closure flap overlying and closing said mouth defined in a wall of said bag
 section said first closure flap including a first attached region which is peelably
 attached to said bag section wall such that at least a portion of said first closure
 flap may be peeled away from said bag section wall across the peelably attached
20 region to reveal the mouth, and, optionally, a second attached region spaced
 from the peelably attached region in which second region said first closure flap is
 also attached to said bag section wall.
- 25 39. A plastic bag as claimed in any of claims 35 to 37 comprising
 a first closure flap overlying and closing said mouth defined in a wall of said bag
 section said first closure flap including a first region which is attached to a said
 bag section wall, said first closure flap including at least one line of weakness
 defining a tearable portion of said first closure flap within which tearable portion
30 said first closure flap is not attached to the bag section wall and which tearable
 portion can be opened by tearing along the line of weakness to reveal the
 mouth; and, optionally, a second attached region spaced from the tearable
 portion in which second region said first closure flap is also attached to said bag
 section wall.

40. A plastic bag as claimed in claim 38 or 39 wherein the first closure flap extends into the closeable region.
- 5 41. A bag as claimed in claim 40 when dependent on claim 37 wherein a first treated area is formed on the first closure flap instead of a treated area of the bag section.
- 10 42. A plastic bag substantially as hereinbefore described with reference to any of Figures 1 to 8.